## IN THE CLAIMS

Claims 1-20 are pending in this application. Please cancel claims 6 and 18 without prejudice or disclaimer, amend the remaining claims 1, 13, 14, 17, and 19 as follows:

1. (Currently Amended) A solution mixing apparatus for providing reactions therein, comprising:

a holding plate for holding at least one substrate on which at least one probe is immobilized; and

a moving plate with one surface being placed close to the substrate with a gap therein so as to accommodate a solution containing at least one substance therebetween, said moving plate moves relatively to the holding plate in a direction parallel to the holding plane to mix ~~the probe with~~ the solution, wherein the surface of said moving plate is hydrophilic.

2. (Original) The solution mixing apparatus according to claim 1, wherein the moving plate moves relatively to the holding plate in one direction forwards and backwards.

3. (Original) The solution mixing apparatus according to claim 1, wherein the moving plate revolves relatively to the holding plate.

4. (Original) The solution mixing apparatus according to claim 1, wherein the reactions include bio-chemical reactions.

5. (Original) The solution mixing apparatus according to claim 1, wherein the gap ranges from 50,000-100,000 nm.

6. (Canceled)

7. (Original) The solution mixing apparatus according to claim 1, wherein the apparatus is equipped with a temperature control apparatus.

8. (Original) The solution mixing apparatus according to claim 1, further comprising a solution injector for injecting the solution from an edge of space between and substrate and the moving plate.

9. (Original) The solution mixing apparatus according to claim 1, further comprising a solution injector for injection the solution via a channel connecting through the moving plate to a space between the substrate and the moving plate.

10. (Original) The solution mixing apparatus according to claim 1, wherein the moving plate moves repeatedly in cycle and at a velocity of 0.1-60 second per one moving cycle.

11. (Original) The solution mixing apparatus according to claim 1, wherein the moving plate moves repeatedly in cycle and at a velocity of 0.9-30 second per one moving cycle.

12. (Original) The solution mixing apparatus according to claim 1, wherein a length of the moving plate along a direction the moving plate moves is equal to or more than twice of a length of an area where the probe is immobilized in the direction the moving plate moves.

13. (Currently Amended) The solution mixing apparatus according to claim 3, wherein the moving plate revolves about a probe-attached area on the substrate repeatedly in cycle~~ like a hulahoop~~.

14. (Currently Amended) The solution mixing apparatus according to claim 3, wherein the revolving plate is circular and an area where the probe is immobilized is polygonal and a diameter of the ~~revolving plate~~ moving plate is equal to or more than twice of a diagonal length of the probe-immobilized area.

15. (Original) The solution mixing apparatus according to claim 3, wherein the moving plate and an area where the probe is immobilized are circular, and a diameter of the moving plate is equal to or more than twice of a diameter of the probe-immobilized area.

16. (Original) The solution mixing apparatus according to claim 3, further comprising a moving means which includes a base plate, at least one shaft, and at least on auxiliary plate, wherein the base plate has the moving plate fixed on one side and the auxiliary plate rotatably attached on another side, while the auxiliary plate has the base plate rotatably attached on one side and the shaft on anther side.

17. (Currently Amended) The solution mixing apparatus according to claim 16, wherein the moving means includes a pair of the shafts[[,]] and a pair of the auxiliary plates,

the moving plate, the base plate and the auxiliary plates are circular, ~~and~~

the moving plate is fixed under a base plate on one side of the base plate, a rotation ~~axe~~ axis of the auxiliary plate is a center of ~~the shaft~~ a pivot, and one shaft is fixed at a distance from a center of the auxiliary plate while another shaft is fixed at the same distance from a center of another auxiliary plate.

18. (Canceled)

19. (Currently Amended) A solution mixing method for providing reactions therein, comprising:

holding at least on substrate on which at least one probe is immobilized on a holding plate;

placing a moving plate with one surface close to the surface of the holding plate thereby accommodating a solution including at least substance of interest therebetween with a gap from the probe held on the substrate, wherein the surface of said moving plate is hydrophilic; and

moving the moving plate relatively to the holding plate in a direction parallel to the holding plane thereby mixing ~~the probe and~~ the solution.

20. (Original) The solution mixing method according to claim 19, wherein the substrate includes at least one probe-attached area, and

the moving plate and the probe-attached area are configured with shapes which work in conjunction with the relative movement to provide an equal solution flow volume at each location on the probe-attached area.